Serial No. - 09/966,163
Art Unit - 1772

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the present application:

1. (Previously Presented) An edge-sealed barrier film composite comprising:

a substrate; and

at least one initial barrier stack adjacent to the substrate, the at least one initial barrier stack comprising at least one decoupling layer and at least one barrier layer, wherein a first decoupling layer of a first initial barrier stack has an area and wherein a first barrier layer of the first initial barrier stack has an area, the area of the first barrier layer being greater than the area of the first decoupling layer, and wherein the first barrier layer is in contact with the substrate or a third barrier layer, sealing the first decoupling layer between the first barrier layer and the substrate or the third barrier layer.

2. (Previously Presented) The edge-sealed barrier film composite of claim 1 wherein the first initial barrier stack includes at least two barrier layers, and wherein a second barrier layer has an area greater than the area of the first decoupling layer and wherein the first and second barrier layers are in contact and seal the first decoupling layer between them.

3. (Previously Presented) The edge-sealed barrier film composite of claim 1 wherein the edge-sealed barrier film composite includes at least two initial barrier stacks, wherein a first barrier layer of a second initial barrier stack has an area greater than the area of the first decoupling layer of the first initial barrier stack and wherein the first barrier layer of the first initial barrier stack and the first barrier layer of the second initial barrier stack are in contact and seal the first decoupling layer of the first initial barrier stack between them.

4. (Original) The edge-sealed barrier film composite of claim 1 wherein at least one initial barrier stack includes at least two decoupling layers.

5. (Original) The edge-sealed barrier film composite of claim 1 wherein at least one initial barrier stack includes at least two barrier layers.

6. (Original) The edge-sealed barrier film composite of claim 1 wherein at least one of the decoupling layers is selected from organic polymers, inorganic polymers, organometallic polymers, hybrid organic/inorganic polymer systems, silicates, or combinations thereof.

7. (Original) The edge-sealed barrier film composite of claim 1 wherein at least one of the barrier layers comprises a barrier material selected from metals, metal oxides, metal nitrides, metal carbides, metal oxynitrides, metal oxyborides, or combinations thereof.

8. (Original) The edge-sealed barrier film composite of claim 1 wherein at least one of the barrier layers comprises a barrier material selected from opaque metals, opaque ceramics, opaque polymers, and opaque cermets, and combinations thereof.

9. (Original) The edge-sealed barrier film composite of claim 1 further comprising an environmentally sensitive device.

10. (Currently Amended) The edge-sealed barrier film composite of claim 9 wherein the environmentally sensitive device is selected from organic light emitting devices, liquid crystal displays, displays using electrophoretic inks, light emitting diodes, displays using light emitting polymers, electroluminescent devices, phosphorescent devices, ~~electrophoretic inks,~~ organic solar cells, inorganic solar cells, thin film batteries, or thin film devices with vias, or combinations thereof.

11. (Previously Presented) The edge-sealed barrier film composite of claim 9 wherein the environmentally sensitive device is adjacent to the substrate and located between the substrate and the at least one initial barrier stack, wherein at least one of the barrier layers of the at least one initial barrier stack has an area which is greater than an area of the

environmentally sensitive device and wherein the at least one barrier layer of the at least one initial barrier stack is in contact with the substrate sealing the environmentally sensitive device between the at least one barrier layer of the at least one initial barrier stack and the substrate.

12. (Original) The edge-sealed barrier film composite of claim 9 wherein the environmentally sensitive device is adjacent to the at least one initial barrier stack on a side opposite the substrate.

13. (Currently Amended) ~~The edge-sealed barrier film composite of claim 12 further comprising~~ An edge-sealed barrier film composite comprising:
a substrate;
at least one initial barrier stack adjacent to the substrate, the at least one initial barrier stack comprising at least one decoupling layer and at least one barrier layer, wherein a first decoupling layer of a first initial barrier stack has an area and wherein a first barrier layer of the first initial barrier stack has an area, the area of the first barrier layer being greater than the area of the first decoupling layer, and wherein the first barrier layer is in contact with the substrate or a third barrier layer, sealing the first decoupling layer between the first barrier layer and the substrate or the third barrier layer;
an environmentally sensitive device adjacent to the at least one initial barrier stack on a side opposite the substrate; and
at least one additional barrier stack adjacent to the environmentally sensitive device on a side opposite the substrate, the at least one additional barrier stack comprising at least one decoupling layer and at least one barrier layer, wherein a first decoupling layer of a first additional barrier stack has an area and wherein a first barrier layer of the first additional barrier stack has an area, the area of the first barrier layer of the first additional barrier stack being greater than the area of the first decoupling layer of the first additional barrier stack, wherein the first barrier layer of the first additional barrier stack is in contact with a third barrier layer, sealing the first decoupling layer of the first additional barrier stack between the first barrier layer of the first additional barrier stack and the third barrier

layer, and wherein at least one barrier layer of at least one initial barrier stack is in contact with at least one barrier layer of at least one additional barrier stack, sealing the environmentally sensitive device between the at least one initial barrier stack and the at least one additional barrier stack.

14. (Currently Amended) An edge-sealed, encapsulated environmentally sensitive device comprising:

~~optionally, a substrate;~~

at least one initial barrier stack comprising at least one decoupling layer and at least one barrier layer, wherein a first decoupling layer of a first initial barrier stack has an area and wherein a first barrier layer of the first initial barrier stack has an area, the area of the first barrier layer of the first initial barrier stack being greater than the area of the first decoupling layer of the first initial barrier stack, and wherein the first barrier layer of the first initial barrier stack is in contact with a third barrier layer or [[the]] an optional substrate, sealing the first decoupling layer of the first initial barrier stack between the first barrier layer of the first initial barrier stack and the third barrier layer or the optional substrate;

an environmentally sensitive device adjacent to the at least one initial barrier stack; and

at least one additional barrier stack adjacent to the environmentally sensitive device on a side opposite the at least one initial barrier stack, the at least one additional barrier stack comprising at least one decoupling layer and at least one barrier layer, wherein a first decoupling layer of a first additional barrier stack has an area and wherein a first barrier layer of the first additional barrier stack has an area, the area of the first barrier layer of the first additional barrier stack being greater than the area of the first decoupling layer of the first additional barrier stack, wherein the first barrier layer of the first additional barrier stack is in contact with a fourth barrier layer, sealing the first decoupling layer of the first additional barrier stack between the first barrier layer of the first additional barrier stack and the fourth barrier layer, and wherein at least one barrier layer of at least one initial barrier stack is in contact with at least one barrier layer of at

least one additional barrier stack, sealing the environmentally sensitive device between the at least one initial barrier stack and the at least one additional barrier stack.

15. (Previously Presented) The edge-sealed, encapsulated environmentally sensitive device of claim 14 wherein the first initial barrier stack includes at least two barrier layers, and wherein a second barrier layer of the first initial barrier stack has an area greater than the first area of decoupling material of the first initial barrier stack and wherein the first and second barrier layers of the first initial barrier stack are in contact and seal the first decoupling layer of the first initial barrier stack between them.

16. (Previously Presented) The edge-sealed, encapsulated environmentally sensitive device of claim 14 wherein the edge-sealed, encapsulated environmentally sensitive device includes at least two initial barrier stacks, wherein a first barrier layer of a second initial barrier stack has an area greater than the area of the first decoupling layer of the first initial barrier stack and wherein the first barrier layer of the first initial barrier stack and the first barrier layer of the second initial barrier stack are in contact and seal the first decoupling layer of the first initial barrier stack between them.

17. (Original) The edge-sealed, encapsulated environmentally sensitive device of claim 14 wherein at least one of the decoupling layers is selected from organic polymers, inorganic polymers, organometallic polymers, hybrid organic/inorganic polymer systems, silicates, or combinations thereof.

18. (Original) The edge-sealed, encapsulated environmentally sensitive device of claim 14 wherein at least one of the barrier layers comprises a barrier material selected from metals, metal oxides, metal nitrides, metal carbides, metal oxynitrides, metal oxyborides, or combinations thereof.

19. (Original) The edge-sealed, encapsulated environmentally sensitive device of claim 14 wherein at least one of the barrier layers comprises a barrier material selected from

opaque metals, opaque ceramics, opaque polymers, and opaque cermets, and combinations thereof.

20. Canceled.

21. (Currently Amended) The edge-sealed, encapsulated environmentally sensitive device of claim 14 wherein the device is selected from organic light emitting devices, liquid crystal displays, displays using electrophoretic inks, light emitting diodes, displays using light emitting polymers, electroluminescent devices, phosphorescent devices, ~~electrophoretic inks,~~ organic solar cells, inorganic solar cells, thin film batteries, or thin film devices with vias, or combinations thereof.